

SEQ ID NO: 6;

(c) a nucleic acid sequence that is SEQ ID NO: 7;

(d) a nucleic acid sequence encoding a protein comprising the amino acid sequence of SEQ ID NO: 8; and

(e) a nucleic acid sequence that is degenerate as a result of the genetic code to the nucleic acid sequence of (a), (b), (c) or (d).

13. (New) An isolated nucleic acid molecule according to claim 12, wherein the glycosyl hydrolase has a hydrophobic cluster analysis (HCA) score with the kappa-carrageenase of *Alteromonas carrageenovora* which is greater than or equal to 75% over the domain extending between amino acids 117 and 262 of the amino acid sequence of *Alteromonas carrageenovora* that is SEQ ID NO: 6.

14. (New) An isolated nucleic acid molecule according to claim 13, wherein the HCA score is greater than or equal to 80%.

15. (New) An isolated nucleic acid molecule according to claim 13, wherein the HCA score is greater than or equal to 85%.

16. (New) A vector comprising a nucleic acid molecule according to claim 12.

17. (New) A host cell genetically modified with a nucleic acid molecule according to claim 12 or with a vector comprising said nucleic acid molecule.

18. (New) A method of producing a protein having glycosyl hydrolase activity, the method comprising:

(a) obtaining the host cell of claim 17; and

(b) growing the host cell under conditions and for a time sufficient to produce the